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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/581,734	03/05/2007	Fred Kramer	66968-0020	4952
84362	7590	06/17/2009		
GKN Driveline/TTG c/o Kristin L. Murphy 39533 Woodward Avenue, suite 140 Bloomfield Hills, MI 48304			EXAMINER HOLMES, JUSTIN	
			ART UNIT 3655	PAPER NUMBER
			MAIL DATE 06/17/2009	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/581,734	Applicant(s) KRAMER ET AL.	
	Examiner JUSTIN HOLMES	Art Unit 3655	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 March 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 June 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>6/6/06</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-19 are currently pending.

Information Disclosure Statement

2. The information disclosure statement (IDS) submitted on June 6, 2006 is being considered by the examiner.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-4, 7-9, 15 and 16 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over U.S. Patent No. 6,460,677 to Roscoe.

Regarding claims 1-4, 8 and 9, the Roscoe patent teaches a differential drive with a rotatably arranged differential carrier in which a multi-plate coupling is arranged so as to be effective between the differential carrier and a sideshaft gear. The differential carrier having a dish-shaped carrier part 12c in which there are received sideshaft gears 16, 17 and differential gears 29, and a dish-shaped cover 12b which receives the plates 22, 24 of the multi-plate coupling. The outer plates 22 of the multi-plate coupling are held in the cover 12b with a toothed arrangement. The inner plates 24 of the multi-plate coupling are form-fittingly held on a hub connected to one of the sideshaft gears 17. See column 3, lines 40-45. There is a sleeve 12d arranged on an

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outside of the cover 12b which axially and radially supports an actuator 70 for the multi-plate coupling. See Fig. 2.

Regarding claims 7, 15 and 16, the cover 12b has axial bores in which there are positioned axially movable journals 41 for transmitting an axial movement from the actuator 70 to the multi-plate coupling 21. See column 3, lines 46-53 and Figs 2 and 3. It would be obvious to one having ordinary skill in the art at the time the invention was made that there are multiple axial bores for the journals 41 since it is stated in column 3, lines 50 that the "tappets 41" is in the plural form which states that there is more than one tappet but only one is shown in the drawings.

Accordingly, all the elements of claims 1-4, 7-9, 15 and 16 are anticipated by the Roscoe patent.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 5, 6, 10-14 and 17-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,460,677 to Roscoe in view of U.S. Patent No. 6,945,898 to Szuba.

The Roscoe patent lacks a teaching that the cover on its circumference has apertures with blades.

The Szuba patent teaches a differential housing 12 having differential gears 40, 42 contained therein. It is also shown that a clutch assembly can be contained within the housing 12. See Figs. 4 and 7A and column 6, lines 47-61. It is also shown that a plurality of apertures 102 are formed in the housing 12 that are associated with blades 100 which have a centripetal effect on the surrounding medium for cooling the mechanism. See column 6, lines 62-7 and column 7, lines 1-18 and Figs. 8A, 8B and 9.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the Roscoe patent to include the lubrication scoops and apertures as taught by the Szuba patent in order to lubricate the differential to facilitate operation of the gears. See column 6, lines 62-65 of the Szuba patent.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. U.S. Patent No. 3,429,400 to Engle et al. teaches lubrication holes and blades on a differential cover. U.S. Patent No. 5,080,640 to Botterill teaches multiple tappets and holes for a differential actuator. U.S. Patent No. 6,379,277 to Victoria et al.; U.S. Patent No. 6,561,939 to Knapke; U.S. Patent No. 6,837,821 to Teraoka et al. and U.S. Patent No. 7,357,748 to Kelley, Jr. all teach various differentials that include multiple axial bores and oil holes.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JUSTIN HOLMES whose telephone number is (571)272-3448. The examiner can normally be reached on 8:00am to 4:30pm M-F.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Marmor can be reached on 571-272-7095. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/JUSTIN HOLMES/
Examiner, Art Unit 3655

/CHARLES A. MARMOR/
Supervisory Patent Examiner, Art Unit 3655